REMARKS/ARGUMENTS

Reconsideration and allowance of this application are respectfully requested. Currently, claims 1, 3-13 and 15-31 are pending in this application.

Objections to the Claims and Rejections Under 35 U.S.C. §112:

Claims 1-31 were objected to because of various informalities. Claims 2-5, 10, 11, 14-23 and 25-31 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Applicant submits that each of the limitations required by these claims has a proper antecedent basis. Applicant thus respectfully requests that the objection to the claims and rejections under 35 U.S.C. §112, second paragraph be withdrawn.

Rejection Under 35 U.S.C. §101:

Claims 13-31 were rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Applicant traverses this rejection.

The Office Action alleges that "claims 13-24 contain 'means-plus-function' limitations and appear to be apparatus. However, it is noted that the specification does not disclose any specific corresponding structure or equivalents thereof. The recited means appear to lack the necessary physical components (hardware) to constitute a machine or manufacture under §101. Therefore, these claim limitations can be reasonably interpreted as computer program modules – software *per se*."

Applicant respectfully disagrees that the "means" limitations required by independent claims 13 and its dependents are directed to software *per se*. For example, with respect to "automatic code generation means", "synchronizing means" and other means phraseology, page 10, lines 10-15 of the specification states, "The automatic code generation section 12, correspondence information formation section 16, simulation section 20, program execution

section 22, break point setting section 24, and synchronizing section 26 are formed of a storage unit, e.g., hard disk unit or ROM, which records programs of processing procedure, and a computer." The allegation that the specification does not disclose any specific corresponding structure or equivalents thereof is thus clearly erroneous. The specification clearly discloses necessary physical components (hardware) corresponding to the means limitations and thus the claims are not directed to software *per se* as alleged by the Office Action.

The means phraseology in claims 25-29 has been deleted. These claims are directed to a "computer-readable medium." These claims are directed to an article of manufacture, and are thus statutory under 35 U.S.C. §101. That is, these claims are not directed to software *per se* as alleged by the Office Action.

Rejections Under 35 U.S.C. §102:

Claims 1, 2, 6-8, 13-14 and 18-20 were rejected under 35 U.S.C. §102 as allegedly being anticipated by Whitehill et al. (U.S. '329, hereinafter "Whitehill"). Applicant respectfully traverses this rejection.

For a reference to anticipate a claim, each element must be found, either expressly or under principles of inherency, in the reference. Each element of the claimed invention is not found in Whitehill. For example, Whitehill fails to disclose "testing presence or absence of abnormality in at least one of the control model and the control program with respect to each relational linkage; wherein the relational linkage is made about similar contents between the control model and the control program based on correspondence information which indicates a correspondence relationship between the control model which is provided at automatic generation of the control program by the automatic code generator and the control program

which is produced from the control model," as required by independent claim 1 and its dependents. Independent claim 13 and its dependents require similar limitations.

An embodiment of the present invention is directed to a system, in which a control program is automatically generated based on a control model (i.e., control specification). For example, the control model may be a fuel injection control for an engine and the control program may be a fuel injection control program, which performs the details (control specification) of the fuel injection control. Therefore, the control model and the control program mostly correspond (i.e., are similar) but may differ in some respects, for instance, in the order of processing (e.g., see order of B3, B5 in FIG. 3). According to the embodiment of the present invention, this difference is checked (26, 357, 358) to be abnormal or unacceptable based on results of control model simulation (20, 315) and control program execution (22, 335). This check is made with respect to each of relational linkages, which are predetermined to correspond or similar to each other between the control model and the control program. The control model simulation and the control program execution may be executed simultaneously as required in claim 13. If any abnormality is found, where it is will be identified easily by referring to the relational link so that it may be fixed.

Whitehill teaches generating from a simulation model a software (program) operable on a target system, and comparing results to check abnormality. The teachings of Whitehill is similar to what is described as the background art in the present specification (pages 2-3). However, Whitehill fails to teach defining a plurality relational linkages between similar contents in the model and the program, and checking abnormality with respect to each relational linkage. Independent claims 1 and 13 are thus not anticipated by Whitehill.

Applicant thus respectfully requests that the rejections under 35 U.S.C. §102 be

withdrawn.

Claims 3-5, 9-12, 15-17 and 21-31 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Whitehill in view of Duboc et al. (U.S. '995, hereinafter "Duboc"). Applicant respectfully traverses this rejection. Claims 3-5, 9-12, 15-17 and 21-24 depend directly or indirectly from independent claim 1 or 13. All of the above comments with respect to Whitehill apply equally to these claims. Duboc fails to resolve the above-described deficiencies of Whitehill. In particular, while Duboc discloses debugging functions including breakpoint operations, Duboc fails to teach or suggest relational linkages between a control model and a control program. Moreover, the breakpoint is not set in correspondence to the relational linkage. Accordingly, even if Duboc were combined with Whitehill, the combination would not teach or suggest all the claim limitations required by independent claims 1 or 13 or their respective dependents. Similar comments apply to independent claims 25 and 29. Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §103 be withdrawn.
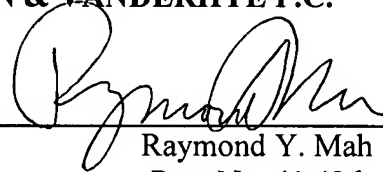
Conclusion:

Applicant believes that this entire application is in condition for allowance and

respectfully requests a notice to this effect. If the Examiner has any questions or believes that an

interview would further prosecution of this application, the Examiner is invited to telephone the

undersigned.

Respectfully submitted,

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By: _____

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